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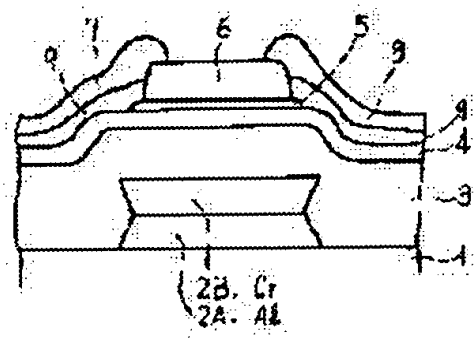
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(54) MATRIX OF THIN FILM TRANSISTOR AND ITS MANUFACTURE

(57)Abstract:
PURPOSE: To suppress the destruction and characteristic change of a thin film transistor (TFT) by static electricity so as to eliminate wrong display by forming a gate having an acute upper edge in its cross section on a substrate.
CONSTITUTION: A gate insulating film having a two-layer structure composed of an alumina film 3 formed by the ALD method and silicon nitride film 4 formed by the P-CVD method is formed on gate electrodes 2A and 2B and gate bus line formed on an NATO glass substrate 1 formed as a transparent insulating substrate. Then, after forming a working semiconductor layer 5 composed of an a-Si film 5, protective film 6 composed of a silicon nitride film, contact layer 9 composed of an m+ a-Si film 9 by using the P—CVD method, etc., a source and drain electrodes 7 and 8 and drain bus line are formed as the matrix of a TFT. Therefore, the destruction and characteristic change of the TFT caused by static electricity can be suppressed and the occurrence of wrong display can be reduced, since the withstand voltage characteristic of the gate insulating film is improved.



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